

System Requirements and Performance (Dollars are in millions except as noted.)						
Pacific Northwest	90	110	125F	125E	New HSR	Maglev
Physical, production, and traffic factors <i>(traffic data is for the year 2020)</i>						
Route-miles	470	469	469	469	451	454
Trip-time, hours, Eugene-Vancouver, BC	7.3	6.4	6.2	6.1	4.1	3.1
Average train speed (mph)	64	74	76	77	109	144
Average fare per passenger-mile (dollars)	0.203	0.248	0.248	0.247	0.339	0.413
Trains per day in each direction	15	15	15	15	17	35
Passengers, Millions of Trips (2020)	3.2	3.1	3.2	3.2	3.5	3.7
Passenger-Miles, Millions (2020)	493	482	497	501	545	574
Average trip length (miles)	152	155	155	155	154	154
Average trip length as % of route length	32%	33%	33%	33%	34%	34%
HSGT traffic density per route-mile (millions of passenger-miles per route-mile)	1.0	1.0	1.1	1.1	1.2	1.3
Percent of air traffic diverted	29.0%	30.9%	31.7%	32.0%	45.7%	53.3%
Percent of intercity auto traffic diverted	3.5%	3.3%	3.5%	3.5%	3.7%	3.6%
Percent of HSGT traffic by source:						
Diverted from air	24%	27%	27%	27%	34%	38%
Diverted from auto	48%	47%	47%	47%	44%	41%
Diverted from conventional rail	12%	12%	12%	12%	11%	10%
Diverted from bus	7%	5%	6%	6%	4%	2%
Induced	9%	9%	9%	9%	9%	8%
Operating efficiency factors, 2020						
Train-miles, millions	5.1	5.1	5.1	5.1	5.6	11.6
Passenger-miles per train mile	96	94	97	98	97	49
Seat-miles, millions	1,356	1,356	1,356	1,356	1,590	1,741
Load factor	36%	36%	37%	37%	34%	33%
Gross ton-miles, millions	1,859	1,777	1,674	1,623	2,194	1,045
Passenger-miles per gross ton-mile	0.27	0.27	0.30	0.31	0.25	0.55
Train-hours, millions	0.08	0.07	0.07	0.07	0.05	0.08
Passenger-miles per train hour	6,146	6,903	7,347	7,502	10,621	7,137
Operating ratio	73%	61%	59%	60%	55%	47%
Operating results for 2020						
Revenues:						
Passenger transportation revenue	\$100	\$119	\$123	\$124	\$184	\$237
Income from ancillary activities	\$4	\$3	\$4	\$4	\$4	\$4
System revenues	\$104	\$123	\$127	\$128	\$189	\$241
<i>Percent of system revenues from ancillary activities</i>	3%	3%	3%	3%	2%	2%
Operating and maintenance expenses:						
Maintenance of way	\$6	\$6	\$6	\$8	\$24	\$25
Maintenance of equipment	\$10	\$10	\$10	\$9	\$13	\$8
Transportation	\$18	\$18	\$18	\$19	\$20	\$30
Passenger traffic and services	\$21	\$20	\$20	\$20	\$23	\$26
General and administrative	\$19	\$19	\$19	\$19	\$23	\$23
Total O&M expense	\$73	\$72	\$73	\$75	\$102	\$112
<i>Per passenger-mile (dollars):</i>						
Maintenance of way	\$0.011	\$0.013	\$0.013	\$0.015	\$0.044	\$0.043
Maintenance of equipment	\$0.020	\$0.020	\$0.020	\$0.017	\$0.023	\$0.015
Transportation	\$0.036	\$0.037	\$0.035	\$0.039	\$0.037	\$0.053
Passenger traffic and services	\$0.042	\$0.042	\$0.041	\$0.041	\$0.042	\$0.045
General and administrative	\$0.038	\$0.039	\$0.038	\$0.037	\$0.042	\$0.040
Total O&M expense	\$0.148	\$0.150	\$0.147	\$0.149	\$0.188	\$0.196
Operating surplus	\$31	\$51	\$54	\$53	\$86	\$129
<i>Operating surplus per passenger-mile (dollars)</i>	\$0.062	\$0.105	\$0.108	\$0.106	\$0.158	\$0.225
Year showing first operating surplus	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000

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<i>Life-Cycle Measures</i> (All amounts are present values, as of the year 2000, of cash inflows/outflows between 2000 and 2040.)						
Revenues:						
Passenger Transportation Revenues	\$783	\$937	\$967	\$976	\$1,460	\$1,900
Income from Ancillary Activities	\$27	\$27	\$29	\$29	\$33	\$35
System Revenues	\$810	\$964	\$996	\$1,004	\$1,492	\$1,935
Less: Total O&M expenses	\$590	\$589	\$595	\$620	\$893	\$985
Operating surplus	\$220	\$375	\$401	\$385	\$599	\$951
Less: Continuing investments	\$40	\$42	\$42	\$61	\$78	\$92
Surplus after continuing investments	\$181	\$333	\$359	\$324	\$521	\$859
Initial investment:						
Initial vehicle investment	\$141	\$155	\$155	\$155	\$339	\$241
Initial infrastructure investment	\$452	\$699	\$1,073	\$1,916	\$7,475	\$13,734
Initial investment for ancillary activities	\$5	\$4	\$5	\$5	\$5	\$5
Initial investment, Total	\$598	\$859	\$1,233	\$2,076	\$7,819	\$13,980
<i>Percent of total initial investment pertaining to--</i>						
Vehicles	24%	18%	13%	7%	4%	2%
Infrastructure	76%	81%	87%	92%	96%	98%
Ancillary activities	1%	1%	0%	0%	0%	0%
<i>Total initial investment per route-mile</i>	\$1.3	\$1.8	\$2.6	\$4.4	\$17.3	\$30.8
Portion of initial investment that is <u>not</u> covered by surplus after continuing investments	\$417	\$526	\$873	\$1,752	\$7,298	\$13,121
Percentage of initial investment covered by surplus after continuing investments	30%	39%	29%	16%	7%	6%
Comparison of Benefits and Costs; Assessment of Partnership Potential						
Surplus after continuing investments	\$181	\$333	\$359	\$324	\$521	\$859
Total benefits:						
Benefits to HSGT users:						
System revenues	\$810	\$964	\$996	\$1,004	\$1,492	\$1,935
Users' consumer surplus	\$1,216	\$1,304	\$1,363	\$1,379	\$1,899	\$2,310
Total benefits to HSGT users	\$2,027	\$2,268	\$2,359	\$2,384	\$3,391	\$4,245
Benefits to the public at large:						
Airport congestion delay savings						
Operation delays	\$44	\$48	\$49	\$50	\$66	\$73
Passenger delays	\$67	\$73	\$75	\$75	\$100	\$111
Total airport congestion delay savings	\$112	\$120	\$124	\$125	\$166	\$184
Highway delay savings	\$510	\$489	\$508	\$513	\$531	\$520
Emission savings	\$26	\$47	\$47	\$68	\$80	\$79
Total benefits to the public at large	\$648	\$657	\$679	\$706	\$777	\$783
Total benefits	\$2,675	\$2,925	\$3,038	\$3,090	\$4,168	\$5,028
Total costs:						
Initial investment	\$598	\$859	\$1,233	\$2,076	\$7,819	\$13,980
O&M expense	\$590	\$589	\$595	\$620	\$893	\$985
Continuing investments	\$40	\$42	\$42	\$61	\$78	\$92
Total costs	\$1,227	\$1,490	\$1,869	\$2,757	\$8,790	\$15,057
Incidence of total costs:						
Costs borne by users	\$810	\$964	\$996	\$1,004	\$1,492	\$1,935
Publicly-borne costs	\$417	\$526	\$873	\$1,752	\$7,298	\$13,121

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Total benefits less total costs	\$1,447	\$1,434	\$1,168	\$333	(\$4,622)	(\$10,028)
Benefits to HSGT users less costs borne by users	\$1,216	\$1,304	\$1,363	\$1,379	\$1,899	\$2,310
Benefits to the public at large less publicly-borne costs	\$231	\$130	(\$194)	(\$1,046)	(\$6,521)	(\$12,338)
Ratio of total benefits to total costs	2.18	1.96	1.63	1.12	0.47	0.33
Ratio of benefits to HSGT users, to costs borne by users	2.50	2.35	2.37	2.37	2.27	2.19
Ratio of benefits to the public at large, to publicly-borne costs	1.55	1.25	0.78	0.40	0.11	0.06
Does this case meet the threshold tests for "partnership potential"?	YES	YES	YES	YES	NO	NO